

IN THE CLAIMS

1. – 23. Canceled.

24. (Previously presented) A surgical device for passing suture through soft tissue comprising:

a first elongate superelastic member having an opening to receive at least one strand of suture.

25. (Previously presented) The device of claim 24, wherein said superelastic member comprises a first resting configuration and is compressable into a second, stressed configuration, and returns towards said first resting configuration as a compressive external force is reduced.

26. (Previously presented) The device of claim 24, further comprising a straightening tube that incorporates a lumen to compress at least a portion of said superelastic member within said lumen.

27. (Previously presented) The device of claim 24, further comprising a straightening tube, and a handle associated with said straightening tube and said superelastic member, wherein said handle is used to advance and retract said superelastic member through said straightening tube.

28. (Previously presented) The device of claim 24, further comprising a grasping mechanism to temporarily clamp soft tissue while said superelastic member is advanced through the soft tissue.

29. (Previously presented) A surgical device for passing suture through soft tissue comprising:

a first elongate superelastic member;

a straightening tube to receive said first superelastic member; and

a grasping mechanism operatively associated with said straightening tube and said superelastic member, said grasping mechanism temporarily clamping soft tissue while said superelastic member is advanced through said soft tissue.

30. (Previously presented) A surgical device for passing multiple suture strands through soft tissue comprising:

a plurality of elongate superelastic members, each member having an opening to receive a strand of suture; and

a straightening tube to compress said members for insertion through a cannulae or trocar;

wherein said members are deployed through said soft tissue to create penetration sites separated by at least 3 mm.

31. (Previously presented) A method for forming a superelastic suture passer having an elongate superelastic member that defines a proximal end and a distal end, a sharpened tip formed at said

distal end of said superelastic member; and an axial slot cut in said superelastic member, said axial slot having a length greater than a thickness of said superelastic member, comprising:

inserting an expansion mandrel into said axial slot;

heating the superelastic member to a temperature ranging between 300 and 600 degrees Celsius; and

reducing the temperature of the heated superelastic member to room temperature.

32. (Previously presented) A method for passing suture through soft tissue comprising:

inserting a strand of suture through an opening defined in a superelastic member;

compressing said superelastic member with an external means from a first resting configuration into a second, compressed configuration for insertion through a cannulae;

puncturing soft tissue with a distal end of said superelastic member;

advancing said strand of suture through said soft tissue as said superelastic member is deployed from said external means wherein said superelastic member returns towards its resting configuration.

33. (Previously presented) A method of rotator cuff repair comprising:

attaching a bone anchor incorporating at least two suture strands to bone;

compressing a superelastic member having an opening containing a suture strand with an external means from a first, resting configuration to a second, compressed configuration;

puncturing the rotator cuff with said superelastic member;
advancing said suture strand through said rotator cuff by removing said external means
wherein said superelastic member returns towards its first, resting configuration;
removing said suture strand from said opening in said superelastic member; and
tying the at least two suture strands into a knot to attach said rotator cuff to said bone.

34. (Previously presented) A method of meniscus repair comprising:

engaging a suture strand having a first end and a second end with an opening in a
superelastic member;
compressing said superelastic member with an external means from a first, resting
configuration to a second, low profile configuration;
puncturing the meniscus at a first side of a tear with said superelastic member;
advancing said first end of said suture strand through said first side with said superelastic
member;
removing said first end of said suture strand from said opening in said superelastic
member;
puncturing the meniscus at a second side of said tear with said superelastic member;
advancing said second end of said suture strand through said second side with said
superelastic member;

removing said second end of said suture strand from said opening in said superelastic member; and

tying said first end and said second end of said suture strand into a knot.

35. (Previously presented) A surgical device for passing suture through soft tissue comprising:

an elongate superelastic member having a thickness and having a first resting configuration that defines at least one curve having a first radius of curvature greater than or equal to 3 times said thickness of said superelastic member;

an opening in said superelastic member adapted to receive at least one strand of suture;

wherein said superelastic member can be straightened into a second configuration having a second radius of curvature larger than said first radius of curvature; and

a sharpened tip on said superelastic member, said sharpened tip to puncture soft tissue and advance said superelastic member through the soft tissue.

36. (Previously presented) A surgical device for passing suture through soft tissue comprising:

an elongate superelastic member having a thickness and having a first resting configuration that defines a first diameter and at least one curve having a radius of curvature greater than or equal to 3 times a first thickness of said superelastic member;

an opening in said superelastic member adapted to receive a strand of suture;

a tip on said superelastic member, said tip to puncture soft tissue and advance said superelastic member through the soft tissue; and

a straightening mechanism associated with said superelastic member and to compress said superelastic member into a second configuration having a smaller outer diameter than said first diameter.

37. (Previously presented) A surgical device for creating a mattress suture knot to secure soft tissue comprising:

at least two superelastic members, each having a first resting configuration defining a first curve, an opening capable of receiving at least one strand of suture, and a sharpened tip to puncture soft tissue; and

at least one straightening mechanism to compress each of said superelastic members into a second configuration defining a second curve having a smaller diameter than said first curve.

38. (Previously presented) The device of claim 37, wherein said superelastic members extend at an angle greater than 0 degrees relative to each other.

39. (Previously presented) The device of claim 37, wherein said superelastic members extend at an angle greater than or equal to 90 degrees relative to each other.

40. (Previously presented) The device of claim 37, wherein said superelastic members are separated from each other by at least 5 mm.

41. (Previously presented) The device of claim 37, further comprising two straightening tubes to receive and separate said superelastic members, wherein ends of said straightening tubes are radially separated by at least 3 mm such that said superelastic members penetrate soft tissue with a separation of at least 3 mm.

42. (Previously presented) The device of claim 37, further comprising two straightening tubes to receive and separate said superelastic members, wherein ends of said straightening tubes are axially separated by at least 3 mm such that said superelastic members penetrate soft tissue with a separation of at least 3 mm.

43. (Previously presented) The device of claim 37, further comprising a grasping mechanism to temporarily clamp soft tissue while said superelastic members are advanced through the soft tissue.

44. (Previously presented) The device of claim 37, wherein said opening is dimensioned to allow at least one suture strand to pass therethrough.

45. (Previously presented) The device of claim 37, wherein said opening defines a crochet hook capable of engaging at least one suture strand.

46. (Previously presented) A surgical device for arthroscopic rotator cuff repair comprising:

a superelastic member having a first resting configuration that defines a first curve with a radius of curvature greater than or equal to 3 times a diameter of said superelastic member, an opening in said superelastic member, said opening to pass a suture strand, and a sharpened tip to puncture through a tendon;

a straightening mechanism to compress said superelastic member into a second stressed configuration that defines a curve with a radius of curvature greater than 2 times a radius of curvature for said first resting configuration; and

an actuation mechanism associated with said superelastic member and said straightening mechanism, wherein said actuation mechanism advances and retracts said superelastic member relative to said straightening mechanism.

47. (Previously presented) A surgical device for passing suture through soft tissue comprising:

a sliding member;

a straightening mechanism defining a tubular member with a central axis and capable of receiving said sliding member; and

a grasping mechanism operatively associated with said straightening mechanism and said sliding member, said grasping mechanism temporarily clamping soft tissue while said sliding member is advanced through said soft tissue;

wherein an end of said straightening mechanism defines a curve through which said sliding member is directed in a non-axial direction relative to said straightening mechanism axis.

48. (Previously presented) A surgical for passing suture through soft issue, the device comprising:

means for advancing suture;

means for straightening the suture advancing means, wherein the straightening means accommodates the suture advancing means therein and allows it to advance therethrough; and

means for grasping soft tissue, wherein said tissue grasping means is in communication with the straightening means;

wherein said suture advancing means directs suture through said soft tissue by advancing through the straightening means while said tissue grasping means maintains a relatively stable position with respect to said soft tissue.

49. (New) The device of claim 24, further comprising:

a first jaw and a second jaw in communication with the first elongate superelastic member, one of the jaws moveable relative to the other.

50. (New) A surgical device for passing suture through soft tissue comprising:

a first elongate member having an opening to receive at least one strand of suture;
a first jaw and a second jaw in communication with the first elongate member, one of the jaws moveable relative to the other.

51. (New) The device of claim 50, further comprising:

a puncturing projection having a distal portion and carrying a suture, the puncturing projection movable between a first position wherein the distal portion of the puncturing projection is substantially contained within an area between the first jaw and the second jaw and a second position wherein the distal portion of the puncturing projection extends beyond the first jaw.